

Abstract of the Disclosure:

In an oxide film etching ^{process}, a plasma having a suitable
 ratio ^a of CF_3 , CF_2 , CF , F is necessary and there is a problem
 5 in ~~which~~ ^{the} in accordance with a temperature fluctuation of
~~an etching chamber an etching characteristic is~~
~~fluctuated.~~ Using UHF type ECR plasma etching apparatus
 having a low electron temperature, a suitable
 dissociation can be obtained, and ^{by maintaining the} forming a temperature
 10 ~~adjustment range~~ of a side wall ~~at~~ from 10 °C and 120 °C a
 stable etching characteristic can be obtained. Since ~~the~~
 oxide film etching using ^a the low electron temperature and
 high density plasma can be obtained, an etching result
 having a superior characteristic can be obtained, and
 15 also ^{the} since ~~a~~ side wall temperature adjustment range is
^{a simplified} low, ~~an~~ apparatus structure and a heat resistant
 performance countermeasure can be ^{obtained} performed easily.

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